Prerequisites for Developing a Program to Market Slaughter Hogs

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Marketing plans should be developed at the onset of the production cycle. Careful planning and a thorough evaluation of production costs, prices, and economic data are the basis for the development of a marketing program. A sound marketing program includes:

1. Examination of outlook information.
2. Determination of financial risk levels.
3. Analyzing operating costs.
4. Understanding hedging and forward contracting.
5. Determining expected profit for each marketing option.
    a. Expected price
    b. Ending basis
    c. Forgone interest and brokerage charges
6. Willingness to accept the final outcome of the marketing decision.

1. Economic outlook data should be assembled and studied. Changes in these data indicate cash and futures price trends. "Idealy", a producer would not hedge, or forward contract unless prices are expected to decline.

Swine producers should evaluate the following data series: current live hog cash and futures prices, corn, soybean, and beef supplies and prices, farrowing intentions, quarterly hog inventory, the hog cycle, and the total meat supply. Futures and cash price data may be acquired from brokerage houses, livestock markets, radio broadcasts, and market news services. Other data series are available from the above and from federal, state, and university publications.

2. Each firm should determine its level of financial risk (probability that the firm will default). Although the financial security of the

firm may be difficult to measure, a thorough examination of the firm's financial statement should be enlightening. For example, a firm which is extensively leveraged and confronts a high fixed repayment schedule faces relatively high financial risks whenever slaughter hog prices decline and/or costs of production increase.

3. A producer must compile or estimate all operating costs. This compilation indicates when to produce hogs and when to hedge, cash market, or forward contract hogs. For example, the producer will not commence production unless the revenue from the expected price covers variable costs. A producer will not hedge or forward contract unless the price will guarantee a profit or will minimize a loss.

4. A hedge involves the sale of a hog futures contract on one of two exchanges during or prior to production. An offsetting futures contract is bought when the live hogs are sold on the cash market. The cash and futures positions are not comparable until the hogs weigh 200 to 230# and grade no. 1-4. Grades 3 and 4 are discounted as specified in the futures contract.

A forward contract is an agreement between a hog producer and a buyer. The agreement, which may be signed with a packer or with the operator of a daily market, specifies quantity and quality of hogs, future delivery date, place of delivery, and price. By entering into the contract, the producer establishes a price early in the production cycle for a specified profit or loss.

To hedge or forward contract hogs, a producer must produce and market 15,000 pounds of pork (75 hogs) or 30,000 pounds of pork (150 head of hogs) in one time period.

5. Swine production and marketing decisions are based on expected profits. The higher the anticipated profits, the more slaughter hogs will be produced. Decisions to forward contract or cash market hogs

are based in part on expected prices and profit levels. To compare the profitability of each marketing option, the producer must estimate the expected ending basis, forgone interest, and trading charges. By considering these variables, cash equivalent prices may be determined and compared for all three marketing options.

The expected cash price is difficult to determine. Existing cash and futures prices and economic data indicate the anticipated price trends. The expected futures price for a contract month is determined in the futures market by the economic activity of speculators and hedgers. The producer can identify the expected price for a specific contract month by analyzing futures price data. The expected forward contract price for a specified contract month is the futures price minus an estimated $2.50 forward contract marketing charge. Specific charges for a contract month may be acquired by contacting the firm who provides the forward contract.

The ending normalized (average) basis for a specified contract month is the futures price minus the local cash price. For a central Ohio local cash market, the ending basis ranges from a low of $.44 in August to a high of $1.39 in December. (Table 1).

The forgone interest is the anticipated earnings given up by not investing in a competitive venture. For example, $1000 may be required to secure a hedge contract for a six month period. This $1000 could be invested in a treasury note which pays 6 percent interest annually. By not investing in the note, the producer forgoes a return of $30.

The brokerage fee is $45 for buying and selling one contract.

By estimating the cost of production, $40/cwt, normal interest loss, $.25/cwt the ending basis, $1.03/cwt, and the commission or forward contract marketing charge ($.01/cwt and $2.50/cwt respectively), the anticipated profit for each marketing option may be determined. In this example the producer may expect: to cover costs from the cash option, a \$4.50/profit from the forward contracting option, and a \$5.71/cwt profit from the hedging option (Table 2). These comparisons do not suggest a long term trend but a comparison for one marketing period. In the next period, a different option may return the highest profits. Farmers must continually monitor all marketing options through time.

6. Since we are unable to accurately predict prices for future periods the farmer must develop and execute a marketing plan. In addition, he must accept the eventual outcome of his decisions. In our example, if the July cash price unexpectedly increases to \$50/cwt at the time of sale, he must be willing to accept the outcome and realize that he gave up an additional \$4-5/cwt profit $[\ \$50 - \$40 = \$10 - \binom{4.50}{5.71} = \genfrac{}{}{0pt}{}{5.50}{4.29}]$ to secure a fixed profit of either \$4.50 or \$5.71/cwt during or prior to production.

TABLE 1. The Annual and Normalized Delivery Month Basis
For Central Ohio Hog Markets, 1969-1975
$/CWT

Year	February	April	June	July	August	October	December
			Delivery Month				
1969	$1.25	$1.18	$1.05	$1.12	$ .73	$ .58	$1.63
1970	1.95	.87	.47	1.23	-.08[1]	.85	1.33
1971	1.27	.57	1.47	1.08	.50	.88	1.10
1972	1.02	1.00	1.02	1.15	-.10[1]	.60	.93
1973	1.10	.95	1.77	0	.85	1.07	1.70
1974	1.70	.84	- .85[1]	2.17	.82	1.87	.87
1975	1.22	2.22	.67	.52	1.25	2.57	2.22
Normalized (Average) Basis	$1.35	$1.09	$ .80	$1.03	$ .44	$1.20	$1.39
Standard Deviation (Variation Around The Average) Basis	.31	.49	.78	.62	.48	.68	.45
Normalized Basis Range 67% Confidence Limits	$1.04 to $1.66	$ .60 to $1.58	$ .02 to $1.58	$ .41 to $1.65	$-.04 to $ .92	$ .52 to $1.88	$ .94 to $1.84

[1]The negative signs indicate that the cash price in the local cash market is greater than the futures prices. In all other instances, the future price is greater than the cash price.

SOURCE: Schlenker, Tom, "The Implications of Economic Factors and Market Information Reports For Various Swine Marketing Strategies With Implications to the Changing Habits," Unpublished Master's Thesis, Ohio State University, 1976.

Table 2: MARKETING OPTIONS:
WHICH OPTION TO SELECT?

Date March 1978

Level of Risk High?,Small?
Level of Profit **Max.?,acceptable?**

		Cash	Forward Contract	FUTURES				
	MONTH	CURRENT	July		July			
(A)	Price[1]	40.00	47.00		47.00			
(B)	Normal Interest Loss/Unit	0			.25			
(C)	Normal Basis	-	-	-	1.03			
(D)	Commission $/Unit	-	-	-	.01			
(E)	Cash Equiv E = A - B - C - D	-	-	-	45.71			
	Margin Deposit[2]	-	-	-	1410			
	Cost of Production/ Unit	40.00	40.00		40.00			
	Net Price/Unit	40.00	44.50[3]		45.71			
	Net Profit	0	4.50		5.71			
	$/Borrowed[4]	?	?		?			

1. all prices and costs are $/cwt.
2. assures a 10 percent margin requirement.
3. assures a $2.50/cwt forward contract market charge.
4. based on negotiations with financial institutions.